JULY 1947

MARKETING ACTIVITIES

U. S. Department of Agriculture
Production and Marketing Administration
Washington 25, D.C.

IN THIS ISSUE:

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Production and Marketing Admin.
U. S. Department of Agriculture
Washington 25, D. C.

Issued monthly. Vol. 10, No. 7

Merchant Truckers in the Market

By William H. Elliott

In the last decade or two, more and more of our perishable produce has been hauled by motortruck. For one thing, the consumption of fresh fruits and vegetables has increased. Our highway system is better. Efficient refrigerated trucks have appeared. And not the least among reasons why perishables travel oftener on rubber tires today is the rise of the merchant trucker.

A merchant trucker is simply a trucker who buys and sells produce. In some localities he may have another name. He differs from the trucker who hauls other people's produce on a for-hire basis. The merchant trucker buys and sells as well as trucks. He's an outgrowth of the development of truck transportation for perishable produce. He's also an important cog in our present system of marketing and distributing this produce.

In many sections these truckers buy at the farm and packing shed and at the shipping point or assembly market. They sell on either the local market or the larger city market. The trend in recent years has been for the distances hauled to get longer. Today merchant truckers link south Florida producing areas with the Atlanta market, and the Rio Grande Valley with the San Antonio market.

In many city markets it's hard to distinguish a merchant trucker from other wholesalers--particularly in markets where most of the wholesalers own trucks that they use for assembling produce. Very often merchant truckers rank among the market leaders in the volume of produce handled. Many of the larger merchant truckers have an established place of business on at least one market, are subject to the same rules that restrict other dealers, and pay the same license fees as other wholesalers who do a comparable volume of business. But the great majority of merchant truckers are itinerants with no established place of business.

Raises New Problems

The merchant trucker's appearance in the field of assembling and distributing perishable produce has raised new problems. One big one is that many growers who bring or send products to market feel that merchant truckers shouldn't be allowed to compete with them for market business on an equal footing. Many wholesalers make the same complaint. So a good many markets nowadays have regulations that seem to have forced the merchant trucker's business away. Such regulations, which tend to split the market, often take the form of discriminatory charges for stall or parking space, or discriminatory allotment of space in the sheds reserved for farmers and truckers. In some markets itinerant truckers are allowed to sell only to established wholesalers operating on the market. And yet, one prime function of market management should be to attract business to the market--so long as that business is fairly conducted.

Do merchant truckers conduct their business fairly? It is often said that many of them do not, particularly when their dealings are with farmers. But when the prejudices in a case are discounted and the facts are in, it usually turns out that the trucker's only fault is that he sold at the highest price he could get, after buying at the lowest price the grower would take.

What is really needed here is a way to keep the grower better informed on current market prices, especially where he customarily sells at the farm. And if he sells at the market, he is likelier to get a suitable price if information on the volume of available supplies is gathered and posted before each trading period begins.

Another serious criticism, often leveled by market managers and wholesalers, is that merchant truckers flood the market with inferior produce. During a trading period, the charge runs, the low-grade produce depresses the prices of all grades. But merchant truckers, it must be remembered, aren't the only sellers who can flood markets.

Restricting the operations of merchant truckers won't be enough to prevent market gluts and bring about orderly distribution. That will take complete market information and other developments too.

There isn't much doubt about one thing. The merchant trucker is in perishables marketing and distribution to stay. Tomorrow he may figure larger than he does today. And when a market is being planned, it's pretty important to design the right kind of facilities for all the traders concerned. Better count the merchant trucker in.

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MOBILE MACHINE SHOPS AID IN FOOT-AND-MOUTH CAMPAIGN

Four units of the U. S. Army's traveling machine shops have arrived at Mexico City from the United States and will soon be available for duty in the areas of Mexico infected by the foot-and-mouth disease.

To hasten slaughter and burial of diseased and infected animals and so prevent the spread of the malady, the Mexico-United States eradication commission has brought from the U. S. hundreds of items of mechanized equipment, including jeeps, trucks, bulldozers, and power shovels, which occasionally break down during field operations.

Heretofore, it has been necessary for crews of mechanics from the commission's main shops in Mexico City to go into the field to repair immobilized machinery. The considerable time required for such service has delayed the disposal of some herds of infected animals.

Each mobile service unit is composed of two trucks, a full range of machine tools, an electric generator, a power lathe, and electric welders, drills, and grinders.

Hartford Plans a New Market

By Francis H. Adams

Hartford, Conn., is planning a regional market that will meet modern-day needs. The market will cover 24 acres owned by the Connecticut Regional Marketing Authority, to which will be added about 10 acres now owned by the metropolitan district and the City of Hartford. Expected to cost about $1,315,000, the market may handle more than $15,000,000 worth of business a year.

The Marketing Authority and the U. S. Department of Agriculture have been cooperating in a survey of Hartford's market facilities and the needs of the area. They found that present facilities consist of a farmers market and a wholesale jobbers market, which operate in different sections of the city. That is, there is no central point where produce may be assembled in quantity to serve farmers, jobbers, and consumers who patronize the produce market. Facilities are duplicated and time is lost as produce and people move between the two market locations.

Prompt Action Needed

Need for prompt action in starting work on the project is increased by the fact that the State highway department expects to run a highway through the section of land where most of the wholesale business is conducted, which will force the trade to move elsewhere in the city.

The Hartford market, serving approximately one-half of Connecticut, is an outlet for fruits and vegetables, eggs, poultry, and other farm products from local farmers and more distant shippers. Plans for the new market are expected to provide ample space and facilities for all patrons. Among other things, the development will include 60 fruit and vegetable stores with rail connections and 13 without, 7 poultry and egg stores, 180 farmers and truckers sheds, a restaurant, a container store, and a service station.

Rail connections at the rear of produce stores will cut down the trucking from team tracks to stores and save an estimated $100,000 a year. Cars of produce can be spotted at the stores instead of being unloaded on team tracks. This should reduce costs of breakage and deterioration by about $45,000 a year, it is estimated.

After the two existing markets are consolidated, retailers by doing all their buying at one market will save time and travel in making their purchases. Farmers will be able to market their produce more conveniently, with fewer losses from crushed fruit, spoiled vegetables, and cracked eggs. Consumers will benefit because the savings in time and labor involved in handling produce in marketing channels will tend to lower the prices in retail stores. In addition, consumers may expect fresher produce.

Establishment of the market would greatly encourage the assembling of a large volume of Connecticut-grown fresh fruits and vegetables, which in turn would attract more out-of-State buyers to this area. A survey recently completed by the Marketing Authority indicates that many out-of-State buyers were discouraged from making produce purchases in the area by the lack of marketing facilities. This factor does much to discourage production increases in the State. During normal times much produce fails to clear on the local markets because there is not a large enough assembly to attract buyers from distant points. One principal beneficial result of the market development would be the offering of locally grown produce in large enough volume to attract distant buyers. It would do much to clear produce at satisfactory prices.

The development also would increase the volume of local produce offered by wholesale fruit and produce distributors. At present, a substantial amount of locally grown produce is offered by the local distributors. Many wholesale distributors handle locally grown produce in season exclusively.

Cost of the market development is estimated at $1,315,000. Market operation would cost about $30,000 a year in salaries and wages, and about $14,000 for other expenses. If the investment were paid off in 25 years, the annual payment required to amortize it would amount to about $72,000.

Cost estimates were made on the basis of prevailing costs of labor and materials in December 1946. The costs of grading and filling, of placing railroad trackage up to and on the Marketing Authority property, and of transferring high-tension power lines that run through the site may be considerably smaller than estimates by the time the contracts are awarded. And additional land owned by the metropolitan district and the city of Hartford, which is needed for the project, may possibly be obtained at a price lower than was estimated.

Because the development would benefit the State, it has been suggested that a self-liquidating bond issue backed by the credit of the State would be a suitable means of financing the project.

Rentals of the market's facilities and the leasing of space to related enterprises should meet operating expenses. Additional revenue would come from the leasing of space for construction of a public garage, a public refrigerated warehouse, and other businesses likely to be associated with the market as its activities develop.

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ACCEPTANCE OF TURKEY STEAKS TO BE TESTED

Minneapolis has been selected as the city to be pilot-tested to determine consumer acceptance of turkey steaks and parts. The test probably will be conducted in September.

NATIONAL RESEARCH ADVISORY COMMITTEE MAKES RECOMMENDATIONS

The National Advisory Committee established under the Research and Marketing Act of 1946 at its July 17-18 meeting in Washington with Secretary of Agriculture Clinton P. Anderson and other USDA officials recommended that special stress be placed on increased marketing efficiency and wider utilization of farm products in the expenditure of the $9,000,000 appropriated by Congress for the 1947-48 year. It also recommended that a large share of the $9,000,000 be used to develop practical methods for marketing critical farm surpluses that may arise in the years ahead.

The recommendations followed the committee's review of research and service projects proposed under the Research and Marketing Act. Pointing out that stress on the marketing of critical surplus products is of continuing interest to both farmers and consumers, the committee recommended that besides the $2,000,000 specifically appropriated for marketing research and service, a reasonable part of the $1,500,000 provided under the act for research in cooperation with the State agricultural experiment stations be used for marketing research. In addition, the act requires that at least $500,000 of the $2,500,000 appropriated for work in the experiment stations be used for marketing.

The committee also suggested that USDA speed up the program for the coming year by contracting with private agencies where they can do work more rapidly, more effectively, or at lower cost than Government facilities.

Among specific suggestions were studies in the cost of distribution of various commodities, development and expansion of markets, and research on new uses and byproducts. The appropriation provides $3,000,000 for research in the utilization of farm products.

Noting that the research and marketing program is still in a formative state, E. A. Meyer, administrator, said that the committee's suggestions will be used to set the course of action the program will take during the first year of operation.

The proposed projects cover work on a wide range of agricultural commodities and functions and include studies to reduce production costs and improve the quality of products. In developing this program the National Advisory Committee and USDA had the benefit of recommendations by advisory committees composed of representatives from agriculture and industry.

The National Advisory Committee recommended that at the beginning of this first year's program a reasonable reserve be set up to provide work for which a definite allocation of funds is not practical at this time. The committee will meet again September 22-23 for further review of this year's program and plans for the program for 1949.

Members of the committee who attended the July sessions were Fred Bailey, Robert R. Coker, John Davis, C. W. Kitchen, Walter Randolph, H. J. Reed, and Kerr Scott.

Four Committees Recommend Projects Under Research and Marketing Act

Recommendations for research projects to be conducted under the Research and Marketing Act of 1946 were made recently by four commodity committees (tree nuts, dry beans and peas, peanuts, and citrus fruits). The reports containing these recommendations are summarized in this issue in considerable detail for the benefit of the many Marketing Activities readers to whom this act and the work that will grow out of it are a subject of great interest.

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The Tree Nuts Advisory Committee, in outlining its recommendations for research projects, said that research in marketing economics should be preferred in the allocation of funds for edible tree nut industry projects. The committee pointed out that research in production, farm management, and related fields, while also important, should be subordinated because such research, by and large, already is being reasonably well handled by State and Federal agencies.

One reason for emphasizing work in marketing economics is that it can be started quickly and will show results relatively soon, the committee said.

The projects recommended were given priority in the following order:

1. Marketing economics.--(a) Distribution. This includes studies of such factors as variations in consumption, differences in market demand, introduction of new containers and new products, competition between nuts, price relationships between distribution levels, cost of distribution and deterioration. (b) Supply. Development of better information on supply, with main emphasis on foreign production, market conditions, and U. S. import reports. Improvement is also needed in domestic production information and in inventories of nuts in cold storage.

Further information on distribution problems is needed soon. Some parts of the industry had serious marketing problems during the last season. Information such as could be gathered in a distribution study would facilitate expansion of outlets and improvement in marketing methods.

Competition from foreign-produced nuts is a major factor in marketing the domestic crop, because about 40 percent of the U. S. supply is imported. The committee considers it very important to improve the reporting service on foreign nut crop production and market conditions, and to that end recommends return of the service to the full jurisdiction of the U. S. Department of Agriculture. The time now required to

assemble information and make it available to the domestic industry should be reduced. Desirable changes in the scheduled release dates of foreign reports should be made, on approval of industry and Government representatives, the committee said.

Improvement is needed in crop reports for certain domestic nuts. To make this improvement calls for gathering basic information, such as from surveys of the number and age of trees and from compilations of production records on certain nut crops.

Information is lacking on stocks of specific nuts in storage. Reports of stocks in cold storage by months have been available in Department reports, but only in totals of all kinds of nuts including peanuts. Reasonably accurate information is needed on storage stocks of specific nuts, both shelled and in shell.

2. Technological utilization.--(a) Processing nuts for oil, and other studies involving chemical and physical research looking to improvement in nut marketing. (b) Research on nut byproducts, including hulls and shells, to develop and improve techniques for extraction of tannins, ascorbic acid, and other chemicals or materials.

The committee said the nut industry would benefit considerably from technological research in developing processes for extracting or manufacturing useful products from nuts, shells, and hulls. Techniques for extracting oils from nuts, tannins from shells, and ascorbic acid from hulls should be developed further. Blanching techniques for domestic filbert kernels need further investigation. Other basic studies should be made in regard to composition of nuts, shells, and hulls, methods of stabilizing oils, and similar problems.

3. Production and harvesting.--(a) Control of insects and diseases. (b) Studies and development of varieties and root stocks. (c) Orchard management.

For many years State and Federal agencies have done valuable work in the field of nut production and harvesting, the committee said. New varieties have been developed, and important studies of root stocks, insects, diseases, and orchard management have been made. Such work should be continued, the committee said. It recommended work to improve equipment to be used in applying agents for the control of insects and tree diseases.

4. Grading, inspection, and storage.—(a) Grading and inspection. (b) Storage and preservation.

Studies were recommended that would promote greater uniformity in grades of pecans, and develop their maximum permissible moisture content. Studies should be continued on the optimum conditions for preserving nuts in storage.

5. Information and education.--(a) Domestic crop and market reports.

Fuller coverage was recommended in the public information on domestic nut crop and market conditions. The committee said that consumer interest in nuts can be stimulated through press, radio, and other media by presenting reliable public information on crop conditions, stocks, and other factors relating to nut production and marketing.

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The Dry Bean and Pea Advisory Committee, in outlining its recommendations for research, divided its report into two parts--marketing and production. Within each part, problems are arranged in the priority order that the committee recommended. The committee also said that marketing problems are generally more pressing than production problems. The development of new uses, it said, is particularly urgent.

Marketing

1. Processing technology.--Research to improve the quality of processed dry peas might provide low-income people with a palatable product and might provide an outlet for substantial quantities of dry soaker peas when the green pea crop is short. Use of dry whole peas or split peas as meat substitutes should be investigated.

2. New uses.--Intensive work is needed at once to find new uses for dry beans and peas. The high protein content of peas may possibly be utilized in making plastics. Research should be continued on the use in feed of pea hulls, culls, chips, and bean culls and splits.

3. Fundamental research on chemical and physical properties.--The properties of bean and pea pods and hulls that help prevent separation of ingredients in certain solutions, especially sprays and insecticides, need more study.

The chemical composition of dry beans and dry peas should be studied, particularly as to their so-called carbohydrate fraction and its digestibility.

4. Biologically active components.--Lima beans and soybeans especially have properties which may have medical uses similar to those of penicillin. These properties should be investigated.

5. Foreign trade.--Data collected on the supplies, exports, and consumer preferences in foreign countries would help to promote markets for U. S. supplies. So also would the analysis of governmental restrictions such as tariff, quota, embargo, and exchange restrictions.

6. Preparation for market.--The methods and machinery used in preparing thresher-run beans and peas for market should be surveyed. Packaging machinery efficiency and the effectiveness of different packaging materials need study. Also needed are better methods of handling and processing wet beans, ways of segregating weevil-damaged peas, and ways of minimizing shrinkage risks on packaged beans.

7. Industry stabilization.--Possibilities of industry stabilization should be studied.

8. Market news.--A Nation-wide market news service on beans and peas is needed. It should report grower and f. o. b. prices, shipments, supplies, and other factors affecting the market.

9. Marketing methods.--Work should be done to develop quality products catering to consumers' tastes and needs. Data should be compiled to show consumer preference in size and type of packages for each class of beans, peas, and split peas. A study should be made of the effect that a widespread use of containers of the sizes and types that consumers prefer would have on the overall consumption of beans and peas.

10. Market organization and costs.--Information on price spreads from the farmer to the consumer for dry edible beans and peas should be collected. A complete cost analysis of storage losses, from grower to retailer, is desirable.

11. Transportation.--Stronger cartons or reinforcement and stronger packaging materials are necessary. Better loading methods for bagged and packaged beans and peas might reduce breakage.

12. Advertising. The possibilities of organized planned advertising, following established techniques, should be investigated.

Production

1. Plant breeding.--Work should be done with all varieties of beans and peas to breed plants for (a) disease and insect resistance, (b) heat and drought resistance, and (c) selection of desirable types for canning.

2. Seed improvement.--There should be a program of education to get a greater use of certified seed. Research is needed on seed beans in order to learn the optimum storage conditions for preventing hard seeds and lack of viability.

3. Insect and disease control.--More needs to be done to control insects that affect dry beans and peas.

4. Mechanization.--Improvements are needed in planting and tillage equipment, particularly harvesting equipment, and research is needed on the effects mechanization has on labor requirements, operating costs, and the proper timing of field operations.

5. Weed control.--A well-coordinated research program is needed on weed control in the important bean and pea producing areas.

6. Cultural practices.--Research should be done to develop proper seeding rates, row widths, planting depths, effective irrigation practices, and proper fertilizer application rates and methods. Also needed

are the development of rotations and profitable systems of farming that would permit conservation of resources.

7. Soil management and conservation practices.--Soil erosion problems in connection with dry bean and pea production require research.

8. Measurement of current and prospective changes in production, income, and costs.--The data in this field for both dry beans and peas are fragmentary. Particularly needed are scientifically gathered data on production costs and net returns per acre in each producing area.

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The Peanut Advisory Committee gave top priority to production research, such as seed improvements and maintenance of seed stocks; mechanization of growing, harvesting, and curing the crop; insect and disease control; fertilizers; and soil amendments. Next, it recommended immediate attention to research on grading and inspection of peanuts. Third, it said that a high priority should be given to research on consumption of peanuts for edible purposes, to ways and means of improving the quality of present edible products, and to discovery of methods of incorporating peanuts into new foods. Fourth, it recommended special attention to developing industrial uses of peanuts and peanut production in order to bolster the market and assist in maintaining the present high production.

Production

1. Plant breeding, varietal improvement, and seed supplies.--Varieties needed for profitable growing, efficient handling, processing, and marketing should be produced by breeding and selection, the committee said. Some of the characteristics needed are higher yields; resistance to diseases, insects, and adverse weather; plant habits adapted to mechanized harvesting; qualities of standing longer, which allow more leeway at harvesttime; uniformity of pod size, shape, and quality; high eating quality and oil yield, and high processing quality in terms of the end purpose; and suitability to a wide range of soil types.

2. Insect control.--More research is needed to control such insects as tobacco thrips, potato leafhoppers, cutworms, velvet bean caterpillars, southern corn root worms, and white-fringed beetles.

3. Disease control.--Research on the control of leaf spots through dusting or spraying with sulfur or certain copper preparations should be expanded. The use and relative effectiveness of the many new synthetic chemicals potentially valuable for disease control should be determined.

4. Mechanization of growing, harvesting, and curing the crop.--Improvement is needed in existing machinery, and additional machinery is needed to do work now done without machines. Particularly important is improvement of machinery used in seed preparation, land preparation, planting, fertilizer placement, weed control, insect and disease control, harvesting, and curing.

5. Fertilizers and soil amendments.--Extended fertilizer research should be done on a regional basis, with one or more soil types in each major peanut producing area taken into consideration.

6. Soil management, cultural practices, and conservation.--Collection of data from which to determine what constitutes the best soil management methods and conservation practices should be extended to cover additional areas. Additional projects should be provided on cropping systems, rotations, planting methods, and cultural practices needed to conserve the soil most effectively.

7. Production economics.--Research is needed to determine costs of labor, power, seed, and material required with various production methods. Research is needed to help farmers to decide whether it will pay them to "hog off" their peanuts, and to help farmers in different areas decide the place of peanuts in profitable systems of farming. Annual statistics should be obtained on production, income, costs, and net returns for the major types and sizes of farms in different areas.

8. Capital requirements and credit sources.--Study is needed of (a) the advantages, disadvantages, and costs of various methods of crop financing, (b) the capital requirements of peanut farmers, and (c) the possibility of a workable loan program for peanuts.

Marketing Facilities, Marketing, and Price Analysis

1. Marketing problems related to production and harvesting.--Large-scale introduction of new varieties should be accompanied by studies of consumer acceptance, price relationships with other varieties, and general marketability. Studies should also be made to determine the extent to which insect infestation and disease cause loss of value. The effect of various harvesting practices on market grade, quality, and the price of farmers stock peanuts should be studied.

2. Storage.--Research is urgently needed on the storage of peanuts shelled and unshelled.

3. Local marketing.--A comprehensive study of the local marketing system should be undertaken to serve as the basis for adjustments and improvements. It should include information on the various types of buyers and handlers, costs and margins, and the methods and practices followed in different growing sections.

4. Grades and inspection.--Research on grades should get immediate attention. Grading standards and their application through inspection should be subjected to careful study, to ascertain what changes are needed. The most workable method of sampling farmers stock peanuts in bags and in bulk should be determined.

5. Market information and statistics.--Market news reports should cover more outlook material, and annual reports are needed on the quality of the crop and carry-over. Ways of improving the dissemination of the reports should be worked out.

6. Economics of processing and marketing peanuts and peanut products.--More statistics should be collected--information on wholesale prices of peanut butter; regularly collected wholesale and retail price series for salted peanuts; reports on production of peanut products other than oil and meal; figures on inventories and disappearance of peanut butter, salted peanuts, and peanut candy. Figures are needed on the geographical movement of peanut products and the percentage of sales through alternative distributing channels. Economic studies of processing should deal principally with problems such as plant location, size of the market to be served, and transportation costs.

7. Price analysis.--A complete analysis of the factors determining peanut prices, production, and consumption would be valuable as a guide in forecasting, in determining agricultural policy with respect to peanuts, and in formulating Government peanut programs.

8. Nutritional and feeding value of peanuts.--Studies should be made to determine ways of preserving the nutritional value of the raw peanuts during processing. It should be determined whether foods containing peanuts would be benefited by adding vitamins, and if so, how much of them. Studies on the feeding properties of peanut products should be conducted, integrated with work on other feeds or aimed at accomplishing a given purpose in some phase of livestock production.

9. Consumer demand and preferences.--More should be learned about consumer preferences and the elements in consumer demand for peanuts and peanut products. Full use should be made of surveys and polls.

Technology of Processing and Industrial Uses

1. Cleaning and shelling.--A study of plant location, size, machinery arrangement, and equipment should be made to find out how to reduce the cost of cleaning and shelling and to turn out an edible product of higher quality. A pilot plant should be set up to test and improve the different operating methods.

2. Food uses of peanut products.--High priority should be given to research on the consumption of peanuts for edible purposes. Also needed are improvements in the quality of present products and discovery of methods of incorporating peanuts into new foods.

3. Processing for oil and meal.--There are considerable opportunities for improving extraction efficiency, reducing costs, and improving products by research. In developing practical peanut processing methods, engineering research is needed on: Solvent extraction (batch and continuous) and continuous mechanical pressing; processing of peanut oil to develop lower cost of operation and smaller loss of materials; oil refining processes; bleaching, winterizing, and hydrogenation processes; separation and purification of peanut proteins derived from solvent extracted meal on a scale sufficiently large to permit collaborative work on the utilization of the protein for fibers, adhesives, films, and plastics.

4. Industrial uses of peanut products.--To broaden the market for peanut oil and reduce the cost of its products, additional research should be done on (a) its chemical and physical properties, (b) methods of modification to increase its interchangeability with other oils, and (c) improvement of its stability for purposes where extremely high stability is required. The protein from peanut meal is capable of being used in the manufacture of adhesives, sizes, and fibers having a wide number of applications. These outlets should be investigated and extended. Hulls and other byproducts need further research.

Education

The committee stressed the importance of passing the results of research findings along to farmers, processors, distributors, and consumers through strengthened educational activities.

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The Citrus Fruit Advisory Committee, arranging its report in sections according to the "general order of immediate need," divided its projects under these headings--marketing; processing and new uses; quality; and production.

Marketing

1. Merchandising.--A comprehensive series of consumer preference studies should be made, covering rural and urban groups at different income levels and in different regions, to determine what should be done to encourage consumer buying of citrus fruits and their products. This study should cover preferences in package and package sizes, and in washing, waxing, wrapping, and the adding of color. Consumer eating habits should be determined by regions, by rural and urban groups, by income groups, and the results compared with nutritional needs. There should be a complete study of the present distribution of fresh citrus fruits and products. Research projects should be set up to determine where and when consumers are inadequately supplied, and what could be done to fill the gaps.

2. Handling methods.--A complete study is needed of consumer packages, packaging machinery, and equipment at the country shipping point and terminal markets. Expanded studies are needed on fruit washing and drying, use of ethylene to de-green fruit, the color-added process for waxing, use of fungicidal treatments such as nitrogen trichloride or various organic compounds for keeping down blue and green mold, and use of fungistatic wraps or liners such as diphenyl impregnated paper. More information is needed on ways of eliminating or cutting down on the use of field boxes and on the substitution of bulk handling from orchard to packing house.

3. Transportation.--The possibilities of making fuller use of new developments in transportation and handling equipment for citrus fruits and other perishable products should be investigated. A general review of the relative efficiencies of railroad, boat, and truck transportation is needed.

4. Marketing costs.--A number of more or less sporadic studies have been made on costs and factors affecting the costs of harvesting, grading, packing, processing, and handling citrus fruits at the country shipping point. These studies should be placed on a continuous annual basis, and the results should be analyzed and coordinated constantly. The costs and methods of wholesale and retail distribution for fresh and processed citrus fruits should be examined, including methods of handling, services performed, cost of services, margins, and means of reducing charges and eliminating service duplications.

5. Export markets.--Much of the information now available for use in formulating programs to expand foreign markets is based on prewar studies, and should be brought up to date. In particular, work is needed in connection with information on: Potential markets; sales and distribution in foreign markets; appearance and quality at time of delivery; and foreign competition.

6. Statistics and analysis.--Improved statistics are needed in these fields: Numbers and ages of trees; packs and stocks; movement and distribution; prices; price analysis; and analysis of regulatory programs.

Processing and New Uses

1. Quality improvement.--Continued research is needed to improve appearance, flavor, and keeping qualities. Although some progress has been made by an investigation of the problem of flavor and color retention in single-strength canned orange juice, an enormous amount of work remains. Recent research has led to commercial production of concentrates of improved quality. Further refinements of the production method are needed to reduce costs. Studies of the storage life of concentrates produced under high vacuum should be extended. Research should be intensified on the study of varieties of orange and grapefruit segments particularly adaptable for canning and freezing, and of suitable antioxidants which increase the storage life of the products.

2. Development of new products.--The possibilities of marketing pure citrus juices as soft drinks should be investigated. Studies are needed to develop uses for spray-dried citrus powders in such products as marmalades and bakery goods. The method of breaking down grapefruit sections into single cells and packing them in sugar sirup needs further development. New blends of citrus juices and combinations of citrus juices with other fruit juices should be studied completely.

3. Utilization and disposal of byproducts.--Continued physical and economic research is required to bring about a greater and more profitable utilization of the increasing residue of peel and pulp from citrus fruit canning and concentrating operations. Promising fields of research are concerned with uses of this waste to produce stock feed, pectin, citrus oils, and plastics.

4. Fundamental research.--The importance of changes caused by microorganisms during processing and before pasteurization should be

completely evaluated. Surveys are needed to identify the enzymes present in citrus fruits. Research is needed to reveal the nutritive values (except vitamin C, on which information is fairly adequate) of fresh citrus fruits and processed citrus products. Other research of this type which was called for in the committee report was discussed under the following headings: Pharmacological Investigations; Fluorometric and Spectrophotometric Studies; High-Frequency Radiation; Optical and Crystallographic Properties; Histological Tests; and Spectrochemical and Colorimetry Investigations.

Quality

1. Market diseases.--Very extensive work has been done and is in progress to prevent decay during the handling and storage of citrus fruits. This work should be continued.

2. Maturity standards and tests.--Since market acceptance depends on the high quality of the product, one major problem of the industry is to determine just when the fruit has reached the degree of maturity that ideally combines moderate acidity and high juice and high sugar content. Development of a uniform and simplified maturity testing method would be immensely valuable to the industry.

3. Grade standards.--U. S. standards have been established for all major fresh citrus fruits, with separate standards for California-Arizona oranges and California-Arizona grapefruit. All of these standards should be studied constantly, to make sure they are meeting industry needs. Research should be started to formulate U. S. standards for citrus fruits to be used for processing, so that producers and processors will have suitable standards as a basis for contracts. Continuing work is needed to keep up to date the U. S. standards for canned grapefruit segments and the principal canned juices and canned concentrates. Research is needed on possible standards for citrus oils, peel, and pulp.

Production

1. Disease and pest control.--Research to control diseases and pests attacking citrus fruits should be continued. More effective and safer methods for applying fumigants against California red scale are needed. Work should be done on the adding of toxicants to oil sprays, and the tolerance of citrus trees to mineral oil. A fundamental study of the development of resistance by insects to insecticides would be of immense practical value. Heavy deposits on the trees from bordeaux mixture or certain nutritional sprays cause the scale insects to increase enormously. Methods to control these insects in spite of the presence of these residues are needed. Also needed is some type of control of insect pests that does not include the use of oils.

The California practice of inspecting and certifying propagating wood to be free from the virus of scaly bark, a systemic disease that causes trees to become nonprofitable when 20 or 30 years old, should be expanded to other citrus-producing areas. Also needed are intensive studies of the causes of the spread of the tristeza disease in South America.

Certain recently discovered new organic fungicides for the control of melanose and scab, the principal citrus fungus diseases, have been developed. Their effectiveness for control when used in combination with various insecticides should be investigated.

2. Varieties and root stocks.--Critical testing and evaluation of varieties is a continuing industry need. Varieties that show weaknesses from the standpoint of fruit quality, size, productiveness, or other factors should be gradually discarded. New varieties resulting from chance seedlings, mutations, or definite breeding work appear from time to time and should be evaluated.

One of the most urgent industry needs is a greatly expanded program of testing the suitability of citrus hybrids as stocks for use under conditions where phytophthora foot-rot is a serious problem. Resistance to salinity in the soil is an important root stock problem in some districts. A critical evaluation of the damage done by nematodes is also needed, as well as a thorough test of available root stock for nematode resistance.

3. Soil and fertilizer.--Much more work is needed to determine the quantities of nutrient elements the trees require, and how and when to apply them. The effect of the quantities and balance of the various elements on fruit quality needs study. Also needed is critical study of the use of oil and other chemicals to control weed growth, from both the economic and plant-response standpoints. Investigations as to water supply in relation to fruit-set, size, and quality are needed with various types of citrus fruits. A complete study is needed of the irrigation and drainage problems in some Texas production acreages, which are developing a serious saline soil condition.

4. Orchard management.--Annual comparisons of production costs in the principal producing areas are needed, and of the current costs of bringing orchards into production in each of the major producing areas. The development of new equipment and ways of efficiently using improved mechanization need study, particularly from the cost point of view. Further development of simple, dependable orchard heaters that burn the oil completely is needed; along with research on alternative protection from cold weather, such as radiant heat and wind machines.

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COTTON AND COTTONSEED ADVISORY COMMITTEES MEET

The Cotton Advisory Committee and the Cottonseed Advisory Subcommittee held their second meeting at Washington on June 23-24, to draw up specific recommendations for research which they believe should receive emphasis during the 1947-48 fiscal year. Meeting in joint session, the two groups recommended that at least a start be made under the Research and Marketing Act during the year in each of these five major fields: Production; ginning and marketing; utilization; foreign markets and competition; and supply-price analyses.

MARKETING BRIEFS:

Citrus Fruits.--Evidence will be received on additional proposed amendments to the California-Arizona lemon marketing agreement and order program at a public hearing to be begun August 4 at Phoenix and continued August 7 at Los Angeles.... USDA announced on July 23 that it is recommending adoption of amendments to the Florida citrus fruit marketing agreement and order program. The recommended amendments, which provide that regulations may be issued containing different grade and size limitations for the Indian River section, were proposed by the Growers Administrative and Shippers Advisory committees that administer the marketing program. The decision to recommend adoption of these amendments is based on the evidence received at the public hearing held on May 12 at Vero Beach, Fla., and on May 14 at Lakeland, Fla.

Dairy Products.--Between June 23 and July 15, PMA activities concerning milk marketing agreements and orders included: Scheduling of hearings to consider proposals for amendment of five Federal orders (Cleveland, Order 75, for June 30; Toledo, Order 30, for July 24; Wichita, Order 68, for July 24; Greater Kansas City, Order 13, for July 21; and St. Louis, Order 3, for July 17). Approval, subject to industry acceptance, of proposed amendments affecting marketing areas of Clinton, Iowa (Order 70); Quad Cities (Rock Island,Moline, and East Moline, Ill., and Davenport, Iowa--Order 44); New York (27); Chicago (41); Cincinnati (65); Fall River, Mass. (47); and Lowell-Lawrence, Mass. (34). Announcement of amendment of the Tri-State (Ohio, Kentucky, and West Virginia) order (72) and the Columbus, Ohio, order (74). Announcement of a 3-day extension--until July 12--for the filing of industry exceptions to a recommended decision on a proposed amendment to the Philadelphia order (61).... As a result of an extension through August of the program to support market prices of nonfat dry milk, the Commodity Credit Corporation will continue to buy at the rate of 9 cents a pound for roller and 10 cents a pound for spray nonfat dry milk in export barrels.

Eggs.--Support buying of dried and frozen eggs is being discontinued in July until further notice, because demand for the rest of the year is expected to be sufficient to maintain farm prices for eggs at levels which will not require Government price support. Producers' prices for eggs during the first 7 months of 1947 reflect an average of 93 percent of parity. Support of egg prices is required under the Steagall Act at "not less than 90 percent of parity" on an annual basis.... USDA has completed arrangements for the cash sale to the British Government of 5,264,000 pounds of dried whole eggs owned by the Commodity Credit Corporation.

Fats and Oils.--Fats and oils export allocations totaling 153,100,000 pounds for the third quarter of 1947 were announced July 11. This amount includes 19,400,000 pounds allocated to export claimants in exchange for other fats and oils needed in the United States. For the third quarter of 1946, final export allocations totaled 179,800,000 pounds.... In mid-July USDA announced that soybean oil would be allocated for export to olive oil producing countries in order to facilitate the movement of olive oil into the U. S. from those countries wishing an

equivalent amount of soybean oil. The oil will be licensed in accordance with the export procedures of the Department of Commerce in quantities not in excess of U. S. olive oil imports for domestic consumption. The plan becomes effective on olive oil shipments arriving in the U. S. on or after August 1, and not later than next February 29.

Grain and Grain Products.--Cancellation of July-August corn export allocations totaling 168,500 long tons (6,740,000 bushels) and replacement of these allocations with 160,000 long tons of wheat, barley, and grain sorghums (6,333,000 bushels) were announced July 7 by USDA.... PMA will supply 48,000 long tons of the July-August allocations of flour for Italy, Austria, and Greece which were previously announced for commercial procurement. These countries are being supplied under the U. S. Foreign Relief Program administered by the Department of State.... Wheat price support at a national average of $1.83 a bushel to farmers for the 1947 crop was announced June 30 by USDA. The rate last year was $1.49 a bushel. Both loans and purchase agreements covering the 1947 crop will be available through the Commodity Credit Corporation.... Formal announcement that there will be no wheat marketing quotas and no acreage allotments during the 1948-49 wheat production and marketing season was made by USDA on July 14.... Export allocations of 15,000 long tons of oilseed cake and meal to Belgium (for shipment in the October-December 1947 quarter), and of 900 long tons of water soluble blood meal to Finland (for shipment in the July-December 1947 period) were made by USDA in mid-July.... Records of transactions involving rice, which were required to be kept by dealers of the rice industry while rice was under price control, should be kept until July 30, 1948, the Sugar Rationing Administration has announced.... July-December 1947 export allocations of 3,800,000 hundred-pound bags of rice have been established. This quantity is about the same as that allocated during the corresponding period last year.... Requirements of the Federal Seed Act with respect to labeling new-crop Kentucky bluegrass seed for germination have been suspended for the period August 7 to October 15. Suspension of the requirements was made to facilitate the movement of 1947 seed in areas where it is needed for fall seeding to supplement carry-over stocks that were estimated to be below normal.

Tobacco.--USDA announced on July 23 its intention to amend the Official Standard Grades for Flue-Cured Tobacco, by adding six new subgroup grades of light ("lemon colored") smoking leaf tobacco. The proposed new grades recognize the effects of recent seed, cultural, and curing improvements that now result in the production of substantial quantities of lemon-colored smoking leaf. These subgrades will be designated H1L, H2L, H3L, H4L, H5L, and H6L.... On July 18 USDA announced the price-support program for 1947-crop flue-cured tobacco. Under existing legislation the average nonrecourse loan rates to cooperating producers will be 90 percent of the parity price at the beginning of the marketing year that began July 1. The marketing year for burley, Maryland, and cigar filler and binder tobaccos begins October 1, and programs for these kinds will be announced later. Auction warehouses will begin selling flue-dured tobacco on July 24 in Georgia and Florida. The flue-cured loan value will be 40 cents a pound, with appropriate differentials for grades and "tied" and "untied" tobacco.

ABOUT MARKETING:

The following addresses and publications, issued recently, may be obtained upon request. To order, check on this page the publications desired, detach and mail to the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Addresses and Statements:

Summary of remarks at a luncheon meeting of the Business Advisory Council, by Clinton P. Anderson, Secretary of Agriculture, at Washington, D. C. June 11, 1947. 3 pp. (Mimeographed)

Summary of remarks at a meeting of the American Plant Food Council, by Clinton P. Anderson, Secretary of Agriculture, at Hot Springs, Va., June 14, 1947. 6 pp. (Mimeographed)

International and National Action on Food, by Clinton P. Anderson, Secretary of Agriculture, at the Special Cereals Conference called by the Food and Agriculture Organization at the request of the International Emergency Food Council, at Paris, France. July 9, 1947. 10 pp. (Mimeographed)

Broadcast by Secretary of Agriculture Clinton P. Anderson and Don Pryor, CBS correspondent, over the Columbia Broadcasting System. July 16, 1947. 9 pp. (Mimeographed)

The Corn Outlook and Its Effects on World Food Needs, by N. E. Dodd, Under Secretary of Agriculture, at Chicago, Ill. July 21, 1947. 10 pp. (Mimeographed)

The Road Ahead for Cotton, by E. D. White, Assistant to the Secretary of Agriculture, at Dallas, Tex. July 16, 1947. 11 pp. (Mimeographed)

Publications:

Carlot Unloads of Certain Fruits and Vegetables in 100 Cities and Imports in 5 Cities for Canada--Calendar Year 1946. (PMA) May 1947. 105 pp. (Multilithed)

Directory of Refrigerated Warehouses in the United States. (PMA) June 1947. 66 pp. (Mimeographed)

Canned Citrus Fruit Segments and Juices--Annual Pack and Disposition Data, 1928-29 to 1945-46. (PMA) June 1947. 19 pp. (Multilithed)

The Federal Insecticide, Fungicide, and Rodenticide Act. (PMA) June 1947. 3 pp. (Mimeographed)

1947 Loan and Price-Support Programs. (PMA) July 1947. 11 pp. (Mimeographed)